

CLAIMS:

1. (Amended) A method of channel decoding speech frames in a receiver capable of multiple (M) codec modes, said channel encoded speech frames comprised of an inband bit portion and a speech portion, said method comprising:

(a) decoding the inband bit portion of a received frame to obtain confidence levels associated with each of the M codec modes ~~700~~;

(b) choosing the most likely codec mode based on the highest confidence level to channel decode the speech portion ~~704~~;

(c) decoding the speech portion ~~310~~ of the received frame using the chosen speech codec mode;

(d) performing a frame determination check ~~720~~ to determine the quality of the decoded speech frame; and

(e) if the decoded speech frame is determined to be of poor quality, then choosing the next most likely codec mode ~~736~~ corresponding to the next highest inband bit decoding confidence level and repeating steps (c) through (e).

2. (Amended) The method of claim 1 wherein steps (c) through (e) are repeated for a maximum number of iterations (N) ~~732~~, where $N \leq M$.

3. (Amended) The method of claim 1 wherein steps (c) through (e) are repeated so long as the confidence level for the inband bit decoding with respect to the current codec mode is above a threshold confidence level ~~802~~.

4. (Amended) The method of claim 2 wherein the maximum number of iterations N is determined prior to choosing the most likely codec mode to decode the speech portion based on the highest confidence level (~~902, 904, 704~~).

5. (Amended) The method of claim 4 wherein the maximum number of iterations (N) is set to the number of codec modes that exceed a threshold confidence level ~~902~~.

6. (Amended) A method of channel decoding speech frames in a receiver capable of multiple (M) codec modes, said channel encoded speech frames comprised of an inband bit portion and a speech portion, said method comprising:

calculating a plurality of inband decode metrics, one for each speech codec mode ~~1002~~;

partially decoding speech data for each speech codec mode ~~1004~~;

determining the most likely speech codec mode ~~1006~~ based upon the partially decoded speech data and the calculated inband decode metric data; and

resuming decoding of the speech data ~~1008~~ using the most likely speech codec mode.

7. (Amended) A receiver for channel decoding speech frames, said receiver capable of multiple (M) codec modes, said channel encoded speech frames comprised of an inband bit portion and a speech portion, said receiver comprising:

an inband bit decoder for:

decoding the inband bit portion of a speech frame to obtain confidence levels associated with each of the M codec modes ~~700~~;

and

choosing the most likely speech codec mode based on the highest confidence level to decode the speech portion ~~704~~; and

a channel decoder coupled with the inband bit decoder for:

decoding the speech portion ~~310~~ of the received frame using the chosen codec mode;

performing a frame determination check ~~720~~ to determine the quality of the decoded speech frame; and

if the decoded speech frame is determined to be of poor quality, then choosing the next most likely codec mode ~~736~~ corresponding to the next highest inband bit decoding confidence level and running the channel decoder on the received frame again.

8. (Amended) The receiver of claim 7 wherein the channel decoder is run for a maximum number of iterations (N) ~~732~~, where $N \leq M$.

9. (Amended) The receiver of claim 7 wherein the channel decoder is run so long as the confidence level for the inband bit decoding with respect to the current codec mode is above a threshold confidence level ~~802~~.

10. (Amended) The receiver of claim 8 wherein the maximum number of iterations N is determined prior to the inband bit decoder choosing the most likely codec mode to decode the speech portion based on the highest confidence level ~~{902, 904, 704}~~.

11. (Amended) The receiver of claim 10 wherein the maximum number of iterations (N) is set to the number of codec modes that exceed a threshold confidence level ~~902~~.

12. (Amended) A receiver for channel decoding speech frames, said receiver capable of multiple (M) codec modes, said channel encoded speech frames comprised of an inband bit portion and a speech portion, said receiver comprising:

an inband bit decoder for:

calculating a plurality of inband decode metrics, one for each codec mode ~~1002~~; and

a channel decoder for:

partially decoding speech data for each codec mode ~~1004~~;
determining the most likely codec mode ~~1006~~ based upon the partially decoded speech data and the calculated inband decode metric data; and

resuming decoding of the speech data ~~1008~~ using the most likely codec mode.